Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) ~~An electrical power distribution system for distributing power from a power source to a plurality of loads~~ A charging system for charging a plurality of batteries from a power source, comprising:

a primary power port configured to receive power from the power source;

a plurality of secondary power ports configured to distribute power from the primary power port to the plurality of ~~loads~~ batteries, each secondary power port being characterized by a power rating, wherein the sum of the secondary power port power ratings establishes an aggregate output power rating, and wherein the aggregate output power rating can exceed a designated power limit; and

a system controller circuit configured to regulate the power distributed by at least one secondary power port of the plurality of secondary power ports such that if the sum of the power ratings of the secondary power ports simultaneously used to charge batteries exceeds the designated power limit, the power received from the power source does not exceed [a] the designated power limit ~~;~~

~~wherein the aggregate output power rating can exceed the designated power limit~~ .

2. (original) The system of claim 1, wherein the designated power limit is equal to a maximum power limit of the power available from the power source, and the aggregate output power rating exceeds the maximum power limit.

3. (original) The system of claim 1, wherein:

the electrical power distribution system receives power-source power only through the primary power port;

the primary power port is characterized by a power rating;

the designated power limit equals the primary power port power rating; and

the aggregate output power rating exceeds the primary power port power rating.

4. (original) The system of claim 3, wherein the power source is a single-phase AC utility.

5. (original) The system of claim 3, wherein the power source is a poly-phase AC utility.

6. (currently amended) The system of claims 3, wherein the system controller is configured to transmit command signals appropriate to direct ~~load~~ battery controllers to regulate power drawn by the ~~loads~~ plurality of batteries.

7. (original) The system of claim 1, and further comprising:

a second primary power port configured to receive power from the power source;

wherein each primary power port is characterized by a power rating;

wherein the designated power limit equals the sum of the primary power port power ratings; and

wherein the aggregate output power rating exceeds the sum of the primary power port power ratings.

8. (currently amended) The ~~charging~~ system of claim 7, wherein the first and second primary power ports are configured to receive power at a different power levels, and wherein the system controller is configured to manage the power received by the first and second primary power ports.

9. (original) The system of claim 1, wherein the system controller is configured such that the designated power limit varies.

10. (original) The system of claim 1, wherein the system controller is configured such that the designated power limit varies periodically.

11. (original) The system of claim 1, wherein the system controller is configured such that the designated power limit varies in accordance with an external signal.

12. (original) The system of claim 11, wherein the aggregate output power rating exceeds the maximum power limit.

13. (currently amended) The system of claim 1, with at least some of the plurality of ~~loads~~ batteries having ~~load~~ battery controllers, wherein the system controller is configured to provide power limit commands by transmitting command signals appropriate to direct the ~~load~~ battery controllers to regulate the power drawn by the ~~loads~~ plurality of batteries.

14. (currently amended) The system of claim 1, wherein the system controller is configured to operate at least one secondary power port of the plurality of secondary power ports ~~is configured to operate~~ bidirectionally.

15. (currently amended) The system of claim 1, wherein the system controller is configured to operate the primary power port ~~is configured to operate~~ bidirectionally.

16. (currently amended) The system of claim 1, and further comprising a ~~dedicated~~ buffer battery, wherein the ~~control~~ system controller is further configured to distribute power from the ~~dedicated~~ buffer battery to at least one secondary power port of the plurality of secondary power ports.

17. (currently amended) The system of claim 16, wherein:

the system controller is configured to direct power from the power source to the ~~dedicated~~ buffer battery when the power provided by the power source does not exceed the designated power limit; and

the system controller is configured to direct power from the buffer battery to the at least one secondary power port when the plurality of ~~loads~~ batteries merits a net distribution of power from the secondary power ports in excess of the designated power limit.

18. (original) The system of claim 1, and further comprising power processor circuitry configured to convert AC power from the power source to DC power; wherein the secondary power ports are configured to distribute the DC power.

19. (original) The system of claim 18, wherein:

the power processor includes a DC to DC converter controlling the distribution of power from the at least one secondary power port; and

the system controller is configured to provide power limit commands that control the operation of the DC to DC converter in order to regulate the power distributed by the at least one secondary power port.

20. (currently amended) ~~An rechargeable device system to be recharged with~~ An electric vehicle system for use with power from a power source, comprising:

a plurality of ~~loads~~ electric vehicles, each electric vehicle having an associated battery;

a primary power port configured to receive power from the power source;

a plurality of secondary power ports configured to distribute power from the primary power port to the plurality of ~~loads~~ batteries associated with the plurality of electric vehicles, each secondary power port being characterized by a power rating, wherein the sum of the secondary power port power ratings establishes an aggregate output power rating, and wherein the aggregate output power rating can exceed a designated power limit; and

a system controller circuit configured to regulate the power distributed by at least one secondary power port of the plurality of secondary power ports such that if the sum of the power ratings of the secondary power ports simultaneously used to charge batteries exceeds the designated power limit, the power received from the power source does not exceed [a] the designated power limit ~~;~~

~~wherein the aggregate output power rating can exceed the designated power limit~~ .

21. (currently amended) The system of claim 20, ~~wherein at least one of the loads is a battery without a battery charger~~ and further comprising a battery not associated with an electric vehicle.

22. (currently amended) The system of claim 20, wherein at least one of the ~~loads is the combination of a battery charger and a battery~~ batteries has an associated battery charger.

23. (currently amended) The system of claim 20, wherein:

at least one ~~load~~ associated batteries ~~of the plurality of loads~~ includes a ~~load~~ battery controller configured to regulate power drawn by the at least one ~~load~~ associated battery; and

the system controller is configured to transmit command signals appropriate to direct the ~~load~~ battery controller of the at least one ~~load~~ associated battery to regulate the power drawn by the at least one ~~load~~ associated battery.

24. (currently amended) A charging system for charging a plurality of batteries using power from a utility at a power level not exceeding a maximum power level, comprising:

a plurality of secondary power ports, each secondary power port being configured to electrically connect to at least one of the plurality of batteries, each secondary power port being characterized by a power rating;

a utility port configured to electrically connect to the utility, and to provide power from the utility to the plurality of secondary power ports;

a system controller configured to control the power distribution between the utility port and the plurality of secondary power ports, wherein if the sum of the power ratings of the secondary power ports used to charge the plurality of batteries exceeds the maximum power level, the system controller controls the power distribution such that the plurality of batteries are simultaneously charged using power from the utility at a power level not exceeding the maximum power level; and

a first charging module, wherein the plurality of secondary power ports includes a first secondary power port and a second secondary power port that receive power from the utility port via the first charging module, the first charging module including

a first power converter connecting to the first secondary power port,

a second power converter connecting to the second secondary power port,

a crossover switch switchably connecting the first power converter to the second secondary power port, and

a module controller configured to control the operation of the crossover switch and establish the power distribution between the first and second secondary power ports.

25. (original) The charging system of claim 24, wherein the utility port is configured to provide power to the plurality of secondary power ports via a distribution bus, and wherein the distribution bus is configured to carry power being transferred between the plurality of secondary power ports.

26. (original) The charging system of claim 24, wherein:

the first power converter of the first charging module connects to the first secondary power port through a first connecting switch of the first charging module;

the second power converter of the first charging module connects to the second secondary power port through a second connecting switch of the first charging module; and

the module controller of the first charging module is configured to control the operation of the first and second connecting switches and establish the power distribution between the first and second secondary power ports.

27. (original) The charging system of claim 24, wherein

the first charging module is configured to receive DC power from the utility port;

the first power converter of the first charging module is a DC-DC power converter; and

the second power converter of the first charging module is a DC-DC power converter.

28. (original) The charging system of claim 24, wherein the module controller for the first charging module is separate from the system controller, and wherein the system controller and the module controller for the first charging module communicate to determine the operation of the crossover switch and the first and second connecting switches.

29. (original) The charging system of claim 24, and further comprising a second charging module, wherein the utility port is configured to provide power to a third secondary power port and a fourth secondary power port of the plurality of secondary power ports via the second charging module, the second charging module including:

a first power converter connecting to the third secondary power port;

a second power converter connecting to the fourth secondary power port;

a first switch switchably connecting the first power converter to the fourth secondary power port; and

a module controller configured to control the operation of the first switch and establish the power distribution between the first and second secondary power ports.

30. (original) The charging system of claim 29, wherein:

the utility port is configured to provide DC power to each of the charging modules via a distribution bus;

the first power converter of the first charging module is a DC-DC power converter;

the second power converter of the first charging module is a DC-DC power converter;

the first power converter of the second charging module is a DC-DC power converter; and

the second power converter of the second charging module is a DC-DC power converter.

31. (original) The charging system of claim 30, and further comprising an AC rectifier configured to receive AC current from the utility port and configured to provide DC current to the distribution bus.

32. (currently amended) A charging system for charging a plurality of batteries using power from a utility at a power level not exceeding a maximum power level, comprising:

a plurality of secondary power ports, each secondary power port being configured to electrically connect to at least one of the plurality of batteries, <u>each secondary power port being characterized by a power rating,</u> wherein the plurality of secondary power ports

include a first secondary power port, a second secondary power port, a third secondary power port and a fourth secondary power port;

a utility port configured to electrically connect to the utility, and to provide power from the utility to the plurality of secondary power ports;

a system controller configured to control the power distribution between the utility port and the plurality of secondary power ports, wherein if the sum of the power ratings of the secondary power ports used to charge the plurality of batteries exceeds the maximum power level, the system controller controls the power distribution such that the plurality of batteries are simultaneously charged using power from the utility at a power level not exceeding the maximum power level;

a distribution bus;

an AC rectifier configured to receive AC power from the utility port and configured to provide DC power to the distribution bus; and

a first charging module and a second charging module, each charging module receiving power from the distribution bus, wherein

each charging module includes a first DC-DC power converter, a second DC-DC power converter, a first crossover switch, and a module controller,

the first power converter of the first charging module is connected to the first secondary power port,

the second power converter of the first charging module is connected to the second secondary power port,

the first crossover switch of the first charging module switchably connects the first power converter of the first charging module to the second secondary power port,

the first power converter of the second charging module is connected to the third secondary power port,

the second power converter of the second charging module is connected to the fourth secondary power port, and

the first crossover switch of the second charging module switchably connects the first power converter of the second charging module to the fourth secondary power port.

33. (new) A charging system for charging a plurality of batteries from a power source, comprising:

a primary power port configured to receive power from the power source;

a plurality of secondary power ports, each being configured to distribute power from the primary power port to a battery of the plurality of batteries, wherein each secondary power port is characterized by a maximum power rating, wherein the sum of the secondary power port maximum power ratings establishes an aggregate output power rating, and wherein the aggregate output power rating can exceed a designated power limit; and

a system controller configured to regulate the power distribution between the primary power port and the plurality of secondary power ports, wherein if the sum of the power ratings of the secondary power ports used to charge the plurality of batteries exceeds the maximum power level, the system controller controls the power distribution such that the plurality of batteries are simultaneously charged a power level not exceeding the designated power limit.

34. (new) The system of claim 33, wherein the designated power limit is equal to a maximum power limit of the power available from the power source.

35. (new) The system of claim 33, and further comprising a second primary power port configured to receive power from the power source; wherein the system controller is configured to regulate the power levels received via the first and second primary power ports.

36. (new) The system of claim 33, wherein the system controller is configured to operate at least one secondary power port of the plurality of secondary power ports bidirectionally.

37. (new) The system of claim 33, wherein the system controller is configured to operate the primary power port bidirectionally.

38. (new) The system of claim 33, and further comprising a buffer battery, wherein the system controller is further configured to distribute power from the buffer battery to at least one secondary power port of the plurality of secondary power ports.

39. (new) The system of claim 38, wherein:

the system controller is configured to direct power from the power source to the buffer battery when the power provided by the power source does not exceed the designated power limit; and

the system controller is configured to direct power from the buffer battery to the at least one secondary power port when the plurality of batteries merits a net distribution of power from the secondary power ports in excess of the designated power limit.

40. (new) A charging system for charging a plurality of batteries, comprising:

a first primary power port from which power may be received;

a second primary power port from which power may be received;

a secondary power port, being configured to distribute power from the first and second primary power ports to a battery of the plurality of batteries; and

a system controller configured to regulate the power levels received via the first and second primary power ports.

41. (new) The system of claim 40, wherein the system controller is configured to operate the secondary power port bidirectionally.

42. (new) The system of claim 40, wherein the system controller is configured to operate the first primary power port bidirectionally.